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IN THE

Supreme Court of the United States,

OCTOBER TERM, 1934.

No. 254.

PARAMOUNT PUBLIX CORPORATION,
Petitioner,

vs.

AMERICAN TRI-ERGON CORPORATION,
Respondent.

BRIEF FOR RESPONDENT.

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PARAMOUNT PUBLIX CORPORATION, Petitioner.	
vs.	No. 254
AMERICAN TRI-ERGON CORPORATION, Respondent.	

BRIEF FOR RESPONDENT.

Opinions Below.

The patent in suit was held valid and infringed by the Circuit Court of Appeals for the Second Circuit, 71 Fed. (2d) 153, reversing the decree of the District Court in which the patent was held invalid, 4 Fed. Supp. 462.

Jurisdiction.

The jurisdiction of this court rests on §240(a) of the Judicial Code as amended by the Act of February 13, 1925, c. 225, 43 Stats. 938; 28 U. S. C. §347.

The Questions Presented.

The patent in suit is No. 1,825,598, issued to the respondent on September 29, 1931 on application of Vogt, Massolle and Engl filed March 29, 1922, and having a

priority date of April 14, 1921 when the corresponding German application was filed (R. p. 468).*

The claims relied on are Nos. 5, 6, 7, 8, 9 and 11, claims 6 and 7 being read with the disclaimer (R. p. 472).

The only issue before this court is the issue of validity. The respondent's title to the patent in suit is unquestioned. Infringement though hotly contested at the trial is undisputed here (Petitioner's Brief, p. 2).

As to validity, the questions presented for decision are these:

1. Are the claims in suit invalid because of anticipation? (First half of the 2nd Specification of Error.)

2. Did the court below adopt a lower standard of invention than that laid down in the decisions of this court and are the claims invalid for want of invention? (Second half of the 2nd and first half of the 3rd Specification of Error.)

3. Did the court below overlook the rule that the application of old processes to new but analogous subject matter is not invention? (Second half of the 3rd Specification of Error.)

4. Did the court below improperly sustain the claim of invention by reference to the commercial use of the process in suit? (4th Specification of Error.)

5. Are claims 8 and 9 of the patent in suit for a broader and different invention from that of the application as filed? (5th Specification of Error.)

6. Is the disclaimer valid? (6th Specification of Error.)

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* The application was held up for five and a half years in the Patent Office by an interference with DeForest, which was decided favorably to applicants in all of the tribunals of the Patent Office and, in May 1931, by the Court of Customs and Patent Appeals (R. pp. 534, 535).

After a brief statement as to the invention in issue, our argument will take up these points in order without further summary. In the course of the argument notice will be taken of the baseless charge of "coercion" brought against the respondent in the petition for rehearing heretofore filed in this cause.

Statement as to the invention.

The patent in suit is for a process, ingenious in its simplicity, for making a combined sound and picture positive film.

The product of the patented process differs from any that was previously known or suggested in the fact that the quality of the pictures is not injuriously affected one iota by the presence of the sound track on the film beside it, nor is the quality of the sound track injured by the presence of the pictures. This feature of the product, made possible by the process of its manufacture, distinguishes both process and product from any prior patent or suggestion of the art, and accounts for its wide use by the industry.

The process comprises as its first step the recording of moving pictures of action on one negative film, and at the same time recording the natural sounds accompanying the action on another negative film. In the case of the pictures this requires ordinarily a speed of sixteen exposures per second. In the case of the sound, it requires exposures of an entirely different order, averaging 4500 per second (R. p. 341). The pictures are taken under varying lighting conditions (Patent in suit, R. p. 468, ll. 10-12). The sound record is made by modulations of a normally steady light source (R. p. 468, l. 17).

As the next step of the process, the separately but simultaneously exposed negatives are subjected to separate, differential development, each according to its distinct requirements. For in addition to the differences in ex-

posure, it is characteristic of sound and pictures that they must be developed to different "contrasts" or "gamma" values (as the experts describe it, R. pp. 63-65, 250) in order to produce results of the best quality in each.

Finally, these two negatives, so separately recorded and separately developed, are printed upon a single positive to form images of the pictures and of the sound side by side on the same face of the positive film.

The product is a unitary sound and picture positive film in which the respective records are each independently recorded and developed to the best advantage and neither is compromised in quality by reason of the presence of the other. Because the product of this process is uncompromised in quality either as to sound or as to pictures, it is distinguished from every suggestion of the prior art and has become the standard product of the industry.

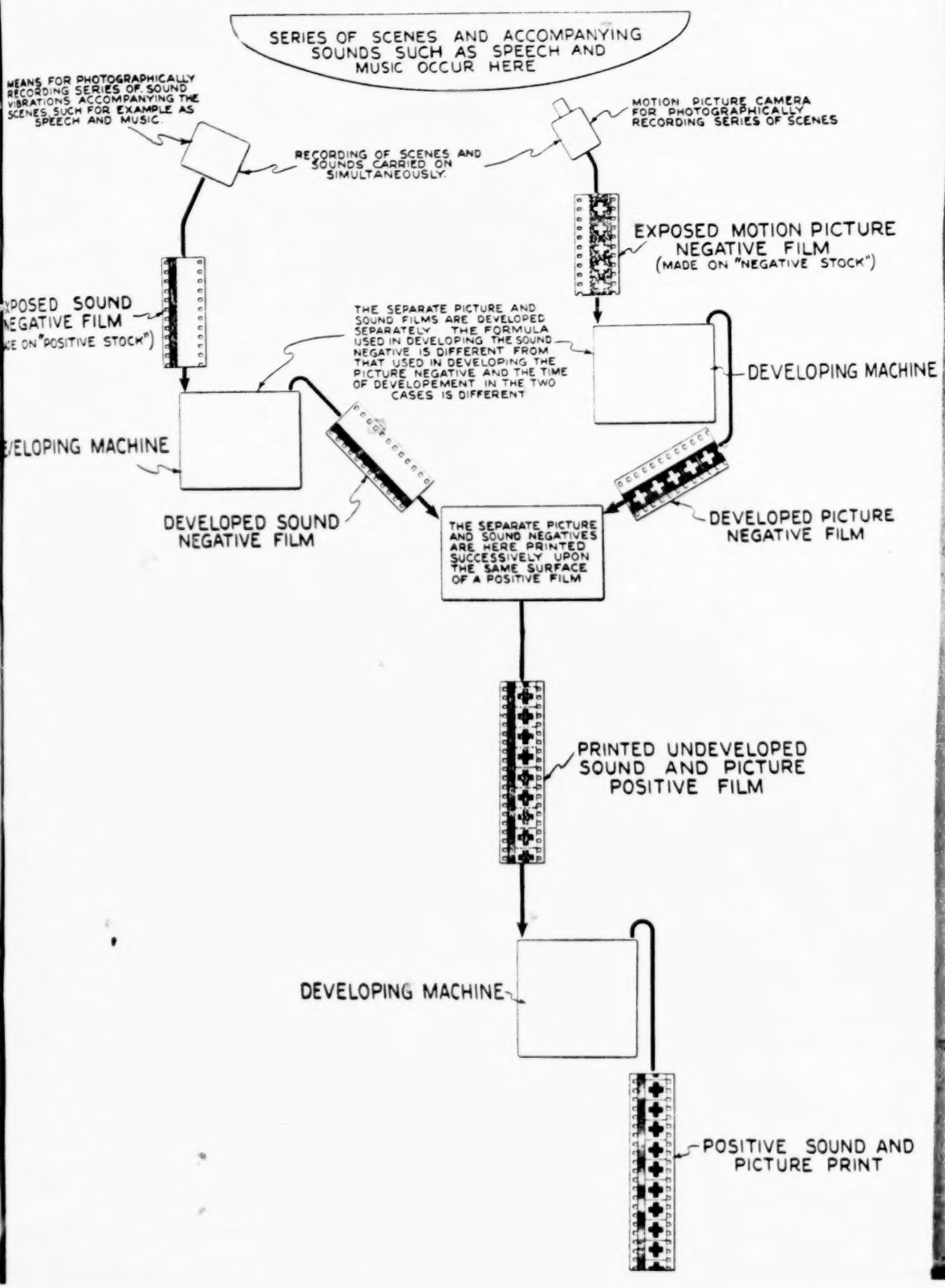
Claim 5 is typical of the specific process claimed in the patent and admittedly used by the petitioner (Petitioner's brief, p. 2) and by the industry in general (R. pp. 65, 197, 199). It reads as follows:

> "5. A process for producing a combined sound and picture positive film, for talking moving pictures, comprising, photographing a sequence of pictures on one length of film, and simultaneously photographing on another length of film a corresponding sequence of sounds accompanying the action, separately developing the two negatives in a manner appropriate for each, and printing the sound and picture negatives respectively upon different longitudinally extending portions of the same sensitized film, to form the sound sequence at one side of and along the picture sequence."

A chart showing the process in suit as practiced by the petitioner (see R. p. 588) is here inserted for convenience of reference. The details of the printing step as practiced by the petitioner are shown in the chart printed at page 48 of petitioner's brief (see R. pp. 53, 589).

The prior art knew theoretically from paper patents how to make a single positive film carrying sound and picture records. But never had such a product been sug-

CHART SHOWING PROCESS AS PER DEFENDANT'S ADMISSION



gested with provision for differential recording and differential developing of the respective records. To say that combined sound and picture films were old before the invention in suit, is to say no more than that the *problem* was old. For in the unitary sound and picture films previously suggested, the sound and pictures were to be recorded on the same negative, developed as a unit and printed from that single negative upon a single positive. By this means the quality of one or both records had to be sacrificed not only in the recording, but in the developing steps by reason of the presence of the other, and the resulting positive was commercially unacceptable. *The problem was to make a combined sound and picture positive that the public would listen to.*

That problem had baffled the art for fifteen years before Vogt, *et al.,* made their invention. It baffled the prior inventors in that art so completely that not a single instance of practical use of sound-on-film prior to 1921 has been attempted to be proved. It baffled the best engineers and research scientists of the Western Electric Company, whose wholly owned subsidiary, *Electrical* Research Products, Inc. (note the name), is conducting the defense in this suit (R. p. 27). Before the Tri-Ergon process, including the process in suit, was disclosed to the Western Electric engineers they had all but abandoned their ten-year effort to make talking pictures by the use of sound-on-film (R. p. 356-359) and had achieved commercial success in August 1926 by the wholly different method of sound-on-disc (R. p. 314). After the demonstration of the Tri-Ergon system to them in late 1926 and the first six months of 1927 by Dr. Engl—one of the patentees,—the process in suit, by its sheer merit and effectiveness in supplying the long felt want, spread from one Western Electric producer-licensee to another, till by the time of the trial it had been almost universally accepted as the standard practice of the industry (R. p. 421).

Western Electric Company, through its dominance of the *electrical* patents used in the amplifying, recording and reproducing of the sounds, has had the talking picture industry, including producers as well as exhibitors, under its complete control* by licenses (non-terminable for 17 years, R. p. 332) issued by its subsidiary, Electrical Research Products, Inc., which was organized for that purpose. By reason of its failure with sound-on-film and its success with sound-on-disc, the Western Electric Company was committed to the latter system and consistently opposed the former (R. p. 414). Despite this powerful opposition the industry progressively demanded sound-on-film and sound-on-film superseded sound-on-disc. To-day sound-on-film is the method of recording sound in synchronism with pictures which has been accepted by all Western Electric licensees both because of the excellence of the result produced and the economical character of the process (R. p. 421).

The widely acclaimed "Western Electric Sound System" embodies the process of the patent in suit. It is the process which that company failed to achieve by its own research; the significance of which it failed to appreciate even when demonstrated to it in 1927; the commercial use of which it at first opposed but finally adopted as an integral part of its standard system. Yet this is the process which it now asserts to be unpatentable because perfectly obvious and all along known.

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*See decision of Judge Nields in *Stanley Co. of America Inc.*, v. *American Tel. & Tel. Co. et al.*, 4 Fed. Supp. 80, holding the system of contracts illegal as violative of the anti-trust laws.

ARGUMENT.

I. Anticipation.

Petitioner's brief presents no defense of direct anticipation of the invention in suit. Each of the prior patents and publications referred to in the petitioner's brief and in the record, and each of the references to prior use of "composite printing" differs in one or more important respects from the invention which the patent in suit proposes and which the petitioner uses.

Indeed petitioner's brief states at page 2:

> "The principal question is whether, in view of the prior art, there was any invention."

and at page 21 it criticizes:

> "The method used by the court below in testing the patent in suit by reference to the prior art, * * * *in that it was limited to a search for some prior patent which, taken alone, read literally in every particular on the patent in suit,* thus disregarding the question of invention over the prior art."*

If there had been any proof of anticipation we may be sure that petitioner's brief would not have failed to point it out. But there is none, and the burden of petitioner's defense is placed on other grounds.

Prior to 1921, when the invention in suit was made, it is literally true that no such product as that produced by the process in suit had been described, used or suggested. We will now point out how that new product, characterized by the new and useful method for obtaining it, differed from any product known before 1921.

The single film system.

Single positive films carrying a picture sequence and a record of sounds accompanying the action had been pro-

* The italics used in this brief are ours, except where otherwise noted.

posed—as in *Haines* (1906—R. p. 1074), *Rosenberg* (1911—R. p. 883), *MacCarty* (1912—R. p. 924), *Ries* (1913—R. p. 591), *Walker* (1913—R. p. 852), etc. But these single positive films were invariably described as the product of the *single film system*, involving the recording of the sounds and pictures on a *single* negative film, developing that film *as a unit* and then printing the sound and picture records from the *single* negative film upon a *single* positive.

The *defect* in the single film system, pointed out in the patent in suit, and borne out by the experience of the subsequent art, lies in the fact that there are differential requirements of recording and developing as between pictures and sound. Pictures are not uniformly exposed on the negative film and require one type of development and one degree of "contrast" or "gamma" for the best optical results (R. p. 29); while the sound track is exposed to modulations of a uniform light source and requires a different type of development and a different degree of "contrast" or "gamma" for the best sound results (R. p. 29). No single developing treatment is appropriate to both, and simultaneous development in a single developer produces bad pictures or bad sound or a composite in which neither is good enough for quality reproduction.

Because the single film system permitted no separate recording and differential development of the sound and picture sequences it has never been accepted as a process for making talking pictures of good quality. It is used today only for news reels where the sounds accompanying the action are of subordinate importance, and where the interpretation of the picture is made by printed titles and oral comment supplied by "scoring" after the film is made.

The double film system.

In addition the prior art had proposed the so-called *double film system*—as in *Rosenberg* (1911—R. p. 883), *Bullis* (1920—R. p. 715), etc. Here the sound and pictures were to be recorded simultaneously on separate films. The picture negative was to be developed and printed on one positive film. The sound negative was to be separately developed and separately printed on another positive film.

The *defect* in the double film system was that in practice it would have required two separate projectors, one for the picture positive, the other for the sound positive. The necessity of using and synchronizing a double set of projectors made the double film system commercially undesirable (R. pp. 343, 354).

Various suggestions were made in the *Bullis* patent, referred to (*infra*, p. 19), for combining the *two separate positive films* on a single projector. They were cumbersome, impractical or inoperative. The practical art passed them by.

Because the double film system did not permit the use of a single or unitary positive print, it failed to solve the practical problem.

By the invention of the process in suit the patentees achieved a new and critically important result.

They showed a method for producing a single unitary positive film for use in talking motion picture reproduction, the film carrying a sound track and a picture sequence side by side, *each being as perfect as the arts of photography and sound recording could make it, and neither being compromised in quality by reason of the presence of the other.* No such product had ever been made or described before.

By thus combining steps from the single film process with steps from the double film process the patentees achieved a result that was new in kind, and of such

importance in respect to the quality of sound and pictures reproduced that it has become the standard practice of the industry.

Petitioner's brief does not once refer to the novel qualities of the product of the process in suit notwithstanding that they are attested by its almost universal use. On the contrary, it seeks to give the impression, not once, but many times (See petitioner's brief, pp. 8 and 19), that the product of the process in suit is no different from "the old single positive film" which had been proposed in many prior paper patents. Indeed, in the Petition for Rehearing of the Petition for Writ of Certiorari herein it is stated (at p. 7) that

> "The patent is for a method of producing positive film prints for talking pictures having a photographic record of action and a photographic record of the accompanying sound printed side by side on its face,—*an old product.*"

This statement is wholly inaccurate and highly prejudicial. Certainly the practical art has found a critical and decisive difference between sound films of the news reel type and sound films such as are used in the production of standard high quality talking pictures. The news reel film belongs in the single film category with unit development of sound and picture. The film used for the reproduction of the high quality talking picture is the film made by the process covered by the patent in suit and is the product of differential exposure and differential development combined in a single uncompromised positive.

If all the sound films the public had to listen to were no better than the news reels, we venture to say that the "talkies" would not yet have superseded the silent "movies." If it were true, as stated at pages 8 and 19 of petitioner's brief, that the patentee's purpose was to "finish up with *the old single positive*" there would be no need of a lawsuit to enjoin its use. The petitioner would not use it; the public would not come or stay to listen to it.

It was precisely because the Circuit Court of Appeals appreciated the distinction which the petitioner's brief ignores that the patent was sustained in that court and the decree of the District Court reversed. The Circuit Court of Appeals recognized that the process in suit owed its existence to the spark of genius which by simple means produced a result never before achieved or suggested.

II. Invention.

The question whether the court below adopted a lower standard of invention than that required by the decisions of this Court does not differ from the question whether the process in suit involves invention. We will treat both specifications of error together.

It is respondent's position that the patent in suit is for a specific improvement of outstanding value. Within its scope it has made an important contribution to the progress of the useful arts. It has won its way to success despite the powerful opposition of the Western Electric Company and despite the preference of the art in its first commercial stages for the disc system.

On the authority of the decision of this Court in the *Grant Tire* case* and for much the same reasons that moved this Court to hold that patent valid, we submit that the invention of the patent at bar is meritorious and that the decision of the Circuit Court of Appeals sustaining it should be affirmed.

In the historic case referred to, this Court said, at pages 434-435:

> "The tire has utility, a utility that has secured an almost universal acceptance and employment of it, as will subsequently appear. It was certainly not an exact repetition of the prior art. It attained an end not attained by anything in the prior art, and has

* *Diamond Rubber Co.* v. *Consol. Rubber Tire Co.*, 220 U. S. 428, pp. 434-5.

been accepted as the termination of the struggle for a completely successful tire. It possesses such amount of change from the prior art as to have received the approval of the Patent Office, and is entitled to the presumption of invention which attaches to a patent. Its simplicity should not blind us as to its character. Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and, 'in the light of the accomplished result,' it is often a matter of wonder how they so long 'eluded the search of the discoverer and set at defiance the speculations of inventive genius.' *Pearl* v. *Ocean Mills*, 11 Off. Gaz. 2. Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skilful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not. It regards a change as evidence of novelty, the acceptance and utility of change as a further evidence, even as demonstration. And it recognizes degrees of change, dividing inventions into primary and secondary, and as they are, one or the other, gives a proportionate dominion to its patent grant. In other words, the invention may be broadly new, subjecting all that comes after it to tribute (*Railway Company* v. *Sayles*, 97 U. S. 554, 556); it may be the successor, in a sense, of all that went before, a step only in the march of improvement, and limited, therefore, to its precise form and elements, as the patent in suit is conceded to be. In its narrow and humble form it may not excite our wonder as may the broader or pretentious form, but it has as firm a right to protection."

and at pages 440-441:

"The utility of the Grant patent, therefore, was not attained in the Willoughby patent. The Rubber Company's conduct is confirmation of this. It uses the Grant tire, as we shall presently see, not the Willoughby tires. Let it be granted that they afforded

> suggestions to Grant, and that he has gone but one step beyond them. It is conceded, as we have said, that his invention is a narrow one—a step beyond the prior art—built upon it, it may be, and only an improvement upon it. Its legal evasion may be the easier, (*Railway Co.* v. *Sayles, supra*), and hence we see the strength of the concession to its advance beyond the prior art and of its novelty and utility by the Rubber Company's imitation of it. The prior art was open to the Rubber Company. That 'art was crowded,' it says, 'with numerous prototypes and predecessors' of the Grant tire, and they, it is insisted, possessed all of the qualities which the dreams of experts attributed to the Grant tire. *And yet the Rubber Company uses the Grant tire. It gives the tribute of its praise to the prior art; it gives the Grant tire the tribute of its imitation as others have done.*"

On the issue of invention, petitioner's brief refers to certain "prior knowledge and practices" (pp. 8-17).

Let it be noted that the "practices" thought worthy of notice are limited to the "Biograph" incident (Petitioner's Brief, p. 11) and the general testimony of defendant's expert Jones. These items of evidence relate solely to the field of composite photography. Since they bear no relation to the prior art in the field of talking motion pictures, they will be considered in the section of this brief dealing with "Analogous Use." All of the remaining instances of the prior art adverted to fall under the head of "knowledge" as distinguished from "practice". There is no attempt to deny that prior to 1921 no practical art of sound-on-film had been developed. The knowledge of the art lay in the realm of untried theory evidenced only by "paper patents".

We will consider now the prior patents in the art of sound-on-film, reserving for a later chapter the patents and "practices" referred to as in the art of composite printing.

The *Haines* British Patent No. 18,057 of 1906 (R. p. 1074) referred to by the petitioner, is the earliest patent

of record relating to sound-on-film. It proposes many of the features of that system for which the Western Electric Company claims credit today; including the electrical transmission of the sound waves from the place where the sounds originate to the place where they are recorded, the recording of the sound waves, photographically by variations in intensity corresponding to the period and amplitude of the sounds, simultaneously with the photographic recording of the scenes; followed by the projection of the moving pictures on a screen while simultaneously employing the sound track on the film to control a selenium cell to vary the electric currents in a telephone system operating to reproduce the sound waves.

It is clear from the description that both the picture series and the sound track were to be recorded on the *same negative film*. The patent is an excellent exposition of the single film system first used commercially in 1926 by the Fox Case Company and now relegated to the news reels.

The *Rosenberg* British patent No. 23,620 of 1911 (R. p. 883) teaches two alternative systems. If the sound and picture records are taken in the first instance on separate negative films the patent teaches that they are then to be printed on separate positives. On the other hand, if taken in the first instance on the same negative film they are then to be printed on the same positive film (Jones, R. p. 295). In other words, *Rosenberg illustrates both of the proposed systems of the prior art*, the single film system wherein the sound and picture record are taken on a single film, developed on that single film and printed on a single positive film; and the double film system where the picture and sound records are to be kept on separate films throughout. But he makes no suggestion of a combination of those two systems nor does he disclose any process whereby a single positive film may be produced upon which the sound and picture

sequences have been printed after separate development of each appropriate to their respective requirements.

With both of these proposals before him, neither he nor any one else prior to the invention in suit, ten years later, conceived of combining them to avoid the difficulties inherent in each.

MacCarty French patent No. 448,757 of 1912 (R. p. 924) discloses according to Jones (R. p. 188):

> "the simultaneous recording of sound and picture on the same sensitive photographic film".

This patent is an example of the single film system. It has no suggestion of separate development of the sound and picture sequences.

Ries patent No. 1,473,976 (application filed in 1913, R. p. 591) is another example of the same single film system. The patent emphasizes that since the pictures must be taken while the film is moving intermittently and the sound record must be made while the film is moving at uniform speed, the simultaneous exposures for the picture and sound records must be made at separated portions of the negative film.

In this Ries was apparently re-stating what had been described in Haines above. There is no suggestion of separate development of the sound and picture sequences nor of the making of a single positive film having printed thereon both the sound and picture sequences after separate development of each in manner appropriate to its particular requirements.

Craig patent No. 1,260,338 (application filed in 1914, R. p. 728) *was a Patent Office reference, over which the claims in issue were held patentable.* It discloses an arrangement that is utterly impracticable; that has never contributed in the slightest degree to the advance of the practical art, though owned by the Eastman Kodak Co.; and stands condemned by the experts for both parties on this record as a monument of ingenious impotence.

Craig proposed to employ two separate negatives for recording the sound and picture sequences. He pro-

posed to print the picture sequence on the sensitized emulsion lying on one face of the positive film, then develop and fix that print to make a record of the picture sequences as in the case of an ordinary positive film for silent moving pictures. Thereafter he proposed to coat the opposite face of the positive film with a photographic emulsion and print, develop and fix the sound record on this second sensitized surface with the result that his picture record would be on one face of the positive film and his sound record on the opposite face *overlying* the picture record. Obviously these overlying records would each destroy the usefulness of the other unless some means were obtainable for effectively projecting different kinds of rays through them; one kind of ray for the projection of the pictures that would be unaffected by the sound record, and a different kind of ray for the projection of the sound that would not be affected by the picture record. It was Craig's theory to use infra-red rays for projecting the sound record and to print the sound record with a material that was wholly transparent to ordinary light rays but impervious to infra-red rays.

He not only failed to disclose any material for the sound record that would be wholly transparent to the light rays proposed for the picture reproduction, but he did not even attempt to disclose any material for the picture record that would be transparent to the infra-red rays proposed for the sound reproduction. His patent is visionary and worthless.

Prof. Ballard went over one by one all the materials suggested by Craig for producing a sound track on the back of the positive that would be transparent to visible light rays and impervious to infra-red rays. Everyone of them was either impossible to apply by any known method or else was impervious to both kinds of rays. Further he pointed out that the infra-red rays used in connection with the sound record would be decidedly affected by the picture record, and its result in his judgment

> "would consist of a jumble of unintelligible noises produced by the passage of the picture record in the path of the infra red rays" (R. pp. 438-440).

He said (R. p. 445):

> "So far as I know, no one has ever been able to make a satisfactory film by the Craig process. * * * It is completely inoperative for many different reasons."

Jones (petitioner's expert, and chief physicist in the research laboratory of the company that owns the Craig patent) went over the same ground on cross-examination condemning one after another of the chemicals suggested by Craig for accomplishing his purpose as useless and not practical. He agreed that Craig does not "show or describe anywhere a sound and picture record on a single film where the sound and picture records do not overlie each other so that they interfere one with the other if ordinary light was used to reproduce both" (R. p. 274). He said of Craig (R. p. 276):

> "in what he was *trying* to do, in the process he was *attempting* to operate, he wanted to print on opposite sides."

The experts are about as near to an agreement as experts can be in asserting it to be wholly inoperative.

Furthermore, the only recited purpose and advantage in using separate films was to permit the picture sequence to be printed at its full width on the positive film and the sound sequence to be printed at full width on the opposite face of the positive film. That is not true of the patent in suit; it is not true of the petitioner's process.

The *Craig* patent is owned by the Eastman Kodak Company (Jones, R. p. 176). Yet that enormous organization made nothing useful out of the Craig invention and never could. When an inventor with such resources behind him is incapable of advancing the art or indeed of putting his own speculative and impractical suggestions to use, the circumstance is compelling evidence of the difficulties

which the problem then held for practical men and inventors and is far more eloquent on the issue of obviousness and inventiveness in later developments than any amount of expert testimony given after the fact.

We submit that the Craig patent, far from showing obviousness or lack of invention in the process in suit, is a demonstration of the difficulty of the problem as it appeared to inventors in this art during the decade prior to 1921.

Walker patent No. 1,186,717 (application filed in 1913, R. p. 852) is another reference stressed by the petitioner. Except for one modification Walker's disclosure is limited to the old, single film system; the sound and pictures were to be taken simultaneously on a single negative, developed together and printed together onto a single positive (R. pp. 262, 263). In the one modification referred to the sole departure from the single film system is that after the single negative film containing the sound and picture sequences has been developed as a unit, Walker describes a method for enlarging the sound record on the positive film by first printing the picture sequence on the positive film and then, by a photographic enlargement system, printing the sound record in enlarged form on the same positive film (Jones, R. p. 263). Jones agreed categorically that

> "In neither of the alternative methods suggested by Walker does Walker separately develop or have any opportunity for separate development of the negatives."

and he agreed that

> "the Walker process is not the process used by the defendant" (R. p. 263).

There is no disclosure whatever in Walker of the outstanding features of the invention in suit, *i. e.*, the separate recording and development of the sound and picture negatives in manner appropriate for each and their subsequent printing on the same positive film. All of the disadvantages that lay in the single film system with its

identical development of both the sound and picture sequences were inherent in Walker's disclosure and no suggestion is given for avoiding them.

We refer also to the *Reimer* German patent No. 279,598 of 1914 (R. p. 919) because, though not mentioned in petitioner's brief, it was singled out by the District Judge in his opinion (R. p. 1186) as appearing to exhaust the novelty of plaintiff's process. His holding, we submit, is contrary to any fair and realistic judgment of the two processes in the light of their actual accomplishment and function. Reimer tried to dodge the whole problem which Vogt and his associates faced by using the now discarded stylus gramophone method. His patent has nothing to do with problems of sound photography or the differential requirements of sound and picture negatives. Instead of producing a single positive film he proposes a clumsy, compound structure comprising two separate records cemented together. Nobody uses such a process or such a product today. The petitioner makes its positive films by the differential process of Vogt *et al.* not by the gramophone process of Reimer. Petitioner produces a single unitary sound and picture positive as described by Vogt *et al.*, not the composite, cemented-together film-and-stylus record of Reimer. If Reimer teaches anything it is that the photographic sound system suggested by Haines, MacCarty and others is too unsatisfactory and presented too many difficulties in 1914 to encourage development along that line. He chose a crude hybrid scheme instead and got nowhere.

If Reimer exhausted the novelty of the process in suit why did the practical art pass it by? Why does not the petitioner use it today? Obviously, we believe, because Reimer's disclosure is as different from that of Vogt *et al.* as failure is from success.

Bullis patent No. 1,335,651 (application filed in 1915, R. p. 714) *was also a reference in the Patent Office* and was duly considered before the allowance of the

claims in suit. Bullis was the earliest patentee in this record to mention the reason and necessity for separate development of the photographic sound and picture sequences. He proposed to take his picture record and his sound record on separate negative films so that they could be separately developed according to their separate needs, *and he then proposed printing them on separate positive films.* So far he followed the practice of the double film system. But then in an effort to overcome the practical difficulties inherent in the projection of separate sound and picture positives he proposed to project his separate sound and picture positives on the same projector by overlapping their edges in such a way as to make the sprocket holes coincide or by actually cementing the overlapped edges of the *separate positive films* in that relation. The overwhelming practical difficulties involved in the use of such a patched-together positive film structure are recited by respondent's expert Ballard (R. pp. 406-408) and no attempt was made to answer these objections nor was Prof. Ballard cross-examined on the subject. The disadvantages and practical objections to Bullis' proposal were explained at length to the Patent Office (R. pp. 493-496), obviously to the entire satisfaction of the Examiners, since Bullis was not cited again.

The petitioner uses no such process as that proposed by Bullis and makes no such double-film product, for the excellent reason that it uses instead the process of the patent in suit which permits the manufacture of a single unitary positive film, a result that Bullis nowhere conceived or described.

Bullis wrestled with the problem and got part way, but when he had gone so far, he could not complete it.

By contrast, Vogt *et al.* thought the thing through to a successful result. Their conception was of a process for accomplishing a result that Bullis never conceived and never achieved.

This Court has not failed to emphasize in earlier cases the importance of such a forward step on the issue of patentability.

In the *Barbed Wire Patent* case, 143 U. S. 275, this Court said, at pages 282-3:

> "Under such circumstances courts have not been reluctant to sustain a patent to the man who has taken the final step which has turned a failure into a success. In the law of patents it is the last step that wins. It may be strange that, considering the important results obtained by Kelly in his patent, it did not occur to him to substitute a coiled wire in place of the diamond shape prong, but evidently it did not; and to the man to whom it did ought not to be denied the quality of inventor. There are many instances in the reported decisions of this court where a monopoly has been sustained in favor of the last of a series of inventors, all of whom were groping to attain a certain result, which only the last one of the number seemed to grasp." Citing *Loom Company* v. *Higgins,* 105 U. S. 580, 591; *Consolidated Valve Company* v. *Crosby Valve Company,* 113 U. S. 157, 179; *Smith* v. *Goodyear Dental Vulcanite Company,* 93 U. S. 486, 495, and *Magowan* v. *New York Belting Co.,* 141 U. S. 332, 343.

It is sheer hindsight to argue that Vogt, *et al.* did no more than apply ordinary skill in carrying out what Bullis had started. For Bullis had more than ordinary skill. He was an able inventor and had all the contemporary knowledge of the art at his disposal, including everything to which petitioner refers in the art of composite printing. If it had been obvious to print the two separate records on a single positive, he would have said so. Instead he felt it necessary to print them on separate positives and then tried to avoid the difficulty of using two projectors by suggesting the still greater difficulty of fastening or cementing these two positives together.

His teaching was essentially of a double film system throughout with a totally useless idea of cementing the two positives together at the end.*

The teaching of Vogt *et al.* was of a means for achieving a new and uncompromised single film positive that could never be achieved by the single film system, could never be achieved by the double film system, and never was achieved or suggested by Bullis.

Weighing the evidence of the art before Vogt *et al.* and the tribute of subsequent practice against the complacent hindsight of expert advocates, we submit that the advance over Bullis amounted to patentable invention under the law.

The *Greensfelder* patent No. 1,254,684 (R. p. 701—application filed in 1916) *was also a reference in the Patent Office and was exhaustively considered before the allowance of the claims in suit.* It is perfectly plain from Greensfelder's disclosure that he made no pretense of producing a talking motion picture film in the sense of the patent in suit and of the practical art. What Greensfelder *avoided* was the contemporary recording of sounds accompanying the scenes. What he *proposed* is known as "scoring". He knew no means for making a satisfactory sound record of the sounds actually accompanying the action and he therefore eliminated that source of sound altogether. Instead his scheme was to record "sound marks" on the positive picture film to cause the operation of extraneous noise-making machines in accompaniment with the silent motion picture for dramatic effect. According to the Greensfelder patent (R. p. 705) a posi-

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* It is noteworthy that the German Court has distinguished the corresponding Vogt German patent from the British patent corresponding to Bullis No. 1,335,651 on the ground that the latter shows *two positive films* as well as two negative films. Its decision states (R. p. 789):

> "Until the stage of the unreeling [projection], at all events, this patent knows of no common film."

tive of the silent picture sequence was first *completed* and projected, as in the old art of silent movies. During this silent reproduction another film of "sound marks" was to be prepared and later printed with the original picture negative on a single positive film. Referring to the practice of that time and contrasting his invention with it, Greensfelder said (R. p. 705, line 31 *et seq.*).

> "Unusual sounds, such as the report of a gun, the shriek of a whistle, the clatter of horses' feet, the cry of a child, the ringing of a bell, etc., all of which add greatly to the vividness of the scene, are generally assigned to one of the men in the orchestra to be reproduced as nearly in synchronism with the corresponding action in the picture as possible.
>
> "The object of the present invention is to provide an improved method whereby these various supplemental sounds, or even the piano accompaniment will be produced by the various instruments in exact synchronism with the reproduction on the picture screen of the scene of which they are illustrative."

Greensfelder proposed to carry out his purpose by providing a space for different sound marks adjacent to each frame of the picture sequence. *The location of the sound mark in the space was what controlled the noise to be produced.* Each location was to be connected by a separate selenium cell and train of mechanism with the noise machine corresponding to that location. Thus if the sound mark were recorded at the extreme left of the space it might, for example, effect the beating of a drum. If it were in a different location it might blow a whistle. If it were in still a third location it might ring a bell, etc. (R. p. 705). He proposed to have room enough in this space so that if desired there might be separate locations for as many sound marks as there are keys on a piano, the idea being that, as the film progressed, the sound marks would cause the piano keys to operate after the manner of an old fashioned piano player. As will be seen, the system required a whole battery of noise-making instruments at the reproducing end and a battery of selenium

cells and associated mechanisms such that whenever a sound mark appeared on the frame of a picture the noise-making mechanism corresponding to the location of that sound mark would be actuated to produce the sound. Rube Goldberg of cartoon fame could hardly conceive anything more complicated or impracticable.

Not only are the products of the respective processes of Greensfelder and of Vogt *et al.* entirely different in fact and in function, but the processes themselves are distinct. Greensfelder takes his picture negative, develops and prints it first before trying to make his sound marks at all. The latter are supposed to be made on a separate film after the picture positive has been completed and reproduced as a silent "movie". In no case does the development of Greensfelder's sound mark negative present any problem like that involved in the differential development of the sound and picture negatives of Vogt *et al.*

Greensfelder does not say a word about separate development of picture and sound negatives. As a matter of fact he has no sound negative in the sense of the patent or of the practical art. His sound marks cannot ***re***produce sounds, they simply serve to put noise machines into operation at the place of exhibition of the otherwise silent "movie". His film contains no "*sequence* of sounds accompanying the action" as called for by the claims in suit.

His whole patent is addressed to a method of escape from the problems of photographic recording of the natural sounds accompanying the action. He shuns the very thing that has made the "talkies" supersede the "movies".

Neither in process, product, or result does the Greensfelder disclosure bear any resemblance to that of Vogt *et al.* We believe the officials of the Patent Office were entirely correct in holding this patent no anticipation of the claims in suit. It is, in fact, another and cogent demonstration of the difficulties which an inventor saw in

this art in 1916 and the extremes to which he went to avoid the problem which the patent in suit has overcome.

The law on the question of invention.

In holding that the claims in suit involved invention over the prior art the court below applied and followed the sound principles laid down and established by this Court in classic decisions on the issue of invention.*

In *Hobbs* v. *Beach*, 180 U. S. 383, this Court found invention in the *idea* that by a simple mechanical change an existing device could achieve new results important in giving rise to a new industry. The Beach patent there in suit was for a machine for pasting paper strips over the joints at the corners of pasteboard boxes, which machine was identical except for minor changes with an earlier Dennis and York machine for pasting strips of paper containing addresses on newspapers, envelopes, and the like. In sustaining the patent this Court said (p. 392):

> "While none of the elements of the Beach patent—taken separately or perhaps even in a somewhat similar combination—was new, their adaptation to this new use and the minor changes required for that purpose resulted in the establishment of practically a new industry, and was a decided step in advance of any that had theretofore been made."
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> * * * * * *
>
> "We agree with the courts below that it did involve invention to see that a machine of the Dennis and York type was adaptable to the work of the Beach

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* In the case at bar, the facts bearing on the issue of invention are substantially undisputed. The findings of the District Judge are no more than conclusions from undisputed facts and are entitled to no such weight as is accorded to a verdict or special findings of fact. He was reversed as to his conclusions by two able circuit judges. It is impossible to know the grounds of Judge Swan's dissent as he wrote no opinion. On this record the judges stand two to one for invention.

device, and, second, to make such changes as were necessary to adapt that device to its new function. With all the anticipating devices before us, it is apparent that the mere change in the shape of the dies was a minor part of the work involved in so changing the Dennis and York machine as to make it perform a wholly different function, *the invention consisting rather in the idea that such change could be made,* than in making the necessary mechanical alterations. As stated by Judge Coxe in his opinion in *Beach* v. *American Box Machine Co.,* 63 Fed. Rep. 597, 'the question is whether a mechanic before any one had thought of pasting stay strips to the corners of boxes by machinery, would construct the Beach machine after seeing the labeling machine. Would the latter suggest the idea and the embodiment of the idea? Would the thought enter the mind of the skilled mechanic with the Dennis and York device before him on his work bench; and if it did, would it not be a creative thought whose presence would convert the mechanic into an inventor?' "

In *Eibel Process Company* v. *Minnesota & Ontario Paper Company,* 261 U. S. 45, this Court sustained the Eibel patent for a paper making machine differing from the previous commercial Fourdrinier machine only in the elevation of the breast roll and wire to produce a certain pitch or angle of the wire in relation to the horizontal. No particular angle was specified in the patent but the court found that by the use of substantially the angle shown in the drawings of the patent the speed of the machine could be increased about 20% and that the industry had generally adopted that angle or pitch. The court said, at page 56:

"The fact that the Eibel pitch has thus been generally adopted in the paper-making business and that the daily product in paper making has thus been increased at least twenty per cent. over that which had been achieved before Eibel is very weighty evidence to sustain the presumption from his patent that what he discovered and invented was new and useful. Of course, although very persuasive, it is not con-

clusive and may be explained. This brings us to the consideration of the evidence of the prior art and the contention of the defendant, and the conclusion of the court below, that the step taken by Eibel, so far as he took one, was a mere obvious application of fully developed devices in the prior art."

The opinion then points out that although the breast roll had been raised to some degree in paper-making machines prior to Eibel, it was for a different purpose and was not as high as the elevation indicated in the drawings of the patent in suit. Thereupon the opinion proceeds, at page 63:

"In administering the patent law the court first looks into the art to find what the real merit of the alleged discovery or invention is and whether it has advanced the art substantially. If it has done so, then the court is liberal in its construction of the patent to secure to the inventor the reward he deserves. If what he has done works only a slight step forward and that which he says is a discovery is on the border line between mere mechanical change and real invention, then his patent, if sustained, will be given a narrow scope and infringement will be found only in approximate copies of the new device. It is this differing attitude of the courts toward genuine discoveries and slight improvements that reconciles the sometimes apparently conflicting instances of construing specifications and the finding of equivalents in alleged infringements. In the case before us, for the reasons we have already reviewed, we think that Eibel made a very useful discovery which has substantially advanced the art. His was not a pioneer patent, creating a new art; but a patent which is only an improvement on an old machine may be very meritorious and entitled to liberal treatment. Indeed, when one notes the crude working of machines of famous pioneer inventions and discoveries, and compares them with the modern machines and processes exemplifying the principle of the pioneer discovery, one hesitates in the division of credit between the original inventor and the improvers; and certainly finds no reason to withhold from the really

meritorious improver, the application of the rule '*ut res magis valeat quam pereat,*' which has been sustained in so many cases in this Court. *Winans v. Denmead,* 15 How. 338, 341; *Corning* v. *Burden,* 15 How. 265, 269; *Turrill* v. *Railroad Co.,* 1 Wall. 491, 510; *Rubber Co.* v. *Goodyear,* 9 Wall. 788, 795; *McClain* v. *Ortmayer,* 141 U. S. 419, 425."

In *Expanded Metal Company* v. *Bradford,* 214 U. S. 366, this Court sustained the Golding patent for a process of expanding metal. The opinion states at page 381:

"It is suggested that Golding's improvement, while a step forward, is nevertheless only such as a mechanic skilled in the art, with the previous inventions before him, would readily take; and that the invention is devoid of patentable novelty. It is often difficult to determine whether a given improvement is a mere mechanical advance, or the result of the exercise of the creative faculty amounting to a meritorious invention. The fact that the invention seems simple after it is made does not determine the question; if this were the rule many of the most beneficial patents would be stricken down. It may be safely said that if those skilled in the mechanical arts are working in a given field and have failed after repeated efforts to discover a certain new and useful improvement, that he who first makes the discovery has done more than make the obvious improvement which would suggest itself to a mechanic skilled in the art, and is entitled to protection as in inventor. There is nothing in the prior art that suggests the combined operation of the Golding patent in suit. It is perfectly well settled that a new combination of elements, old in themselves, but which produce a new and useful result, entitles the inventor to the protection of a patent. *Loom Company* v. *Higgins,* 105 U. S. 580-591.

"To our minds, Golding's method shows that degree of ingenuity and usefuless which raises it above an improvement obvious to a mechanic skilled in the art, and entitles it to the merit of invention. Others working in the same field had not developed it, and the prior art does not suggest the combination of operations which is the merit of Golding's invention."

In *Carnegie Steel Company* v. *Cambria Iron Company,* 185 U. S. 403, another case involving a process patent attacked as involving no invention over the prior art, this Court said, at pages 429-30:

> "It is true the Jones patent is a simple one, and in the light of present experience it seems strange that none of the expert steel makers, who approach so near the consummation of their desires, should have failed to take the final step which was needed to convert their experiments into an assured success. This, however, is but the common history of important inventions, the simplicity of which seems to the ordinary observer to preclude the possibility of their involving an exercise of the inventive faculty. The very fact that the attempt which had been made to secure a uniformity of product, seems to have been abandoned after the Jones invention came into popular notice, is strong evidence tending to show that this patent contains something which was of great value to the manufacturers of steel, and which entitled Jones to the reward due to a successful inventor."

The oft-quoted statement of this Court in *Loom Company* v. *Higgins,* 105 U. S. 580, 591, is as applicable to a process as to a combination of known mechanical elements achieving a new result. The court said at page 589:

> "Turning now to the invention claimed by Webster, * * * we find that, although it produced a great improvement in the art of weaving pile fabrics, yet, as actually exhibited in conception and accomplishment, it seems simple.
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> * * * * * *
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> "At this point we are constrained to say that we cannot yield our assent to the argument, that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention. Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with inventions of the greatest merit. It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and

beneficial result, never attained before, it is evidence of invention. It was certainly a new and useful result to make a loom produce fifty yards a day when it never before had produced more than forty; and we think that the combination of elements by which this was effected, even if those elements were separately known before, was invention sufficient to form the basis of a patent" (pp. 591-2).

The decision of this Court in *Seabury* v. *Am Ende*, 152 U. S. 561 (1894) is closely analogous in its facts to the question of invention presented here in respect of the adoption and combination of steps from the single film system and the double film system to produce a product better than that obtainable by the use of either system alone. The facts are sufficiently stated in the opinion (pp. 567-9):

"The next contention is, that as the plaintiffs' patented dressing was composed of materials whose specific virtues and modes of operation were well known, there was no invention shown in combining them in the manner described. It is, indeed, true that the patentee did not claim to have been the first to suggest the use of cotton fibre as a means of excluding germs from wounds or from the article to be protected. Nor did he claim to have first discovered the antiseptic qualities of boracic acid or the hygroscopic property of glycerine. *But the patentee was the first to perceive that by combining these articles, in the manner he pointed out, there would be formed a convenient and permanent dressing with the desirable qualities of the several constituents.* The complainant's evidence satisfactorily shows that, in such a dressing, the cotton acts as a screen to exclude germs and as a vehicle to hold the other ingredients; that the boracic acid possesses marked antiseptic qualities, but is liable, if used alone, to dry on the cotton and to form crystals, which impair the antiseptic qualities of the acid, and which mechanically scratch or irritate the sensitive surface of a wound; and that the glycerine, owing to its property of absorbing moisture from the atmosphere, keeps the boracic acid from hardening or crystallizing, and besides adds some-

what to the healing and preservative power of the dressing.

"The merits of the complainant's invention received immediate and widespread recognition, and the article came into use, not only to protect animal substances for alimentary purposes, but, and chiefly, to protect wounds from infection and suppuration. It was introduced into hospitals and into the private practice of physicians, and, in fact, has become a staple article for medicinal purposes.

"But it is further contended that there was no novelty in complainant's invention, because it had been anticipated by others. To sustain this contention the defendant put in evidence an article published in the American Journal of Pharmacy for November, 1871, at page 516, where it is stated that Professor Gubler, at a recent meeting of the Academy of Medicine, had exhibited some specimens of wadding prepared by saturating it with a certain quantity of glycerine, which he had found to render it permeable to all medicinal liquids, without causing it to lose any of its suppleness and lightness. Also, an article in the same journal, for March, 1867, at page 149, wherein Dr. Adolphus stated that, 'applied to suppurating surfaces which are painful and produce an ichorous pus, glycerine dressings change the abnormal condition by arresting the degenerating process, through its antiseptic and astringent properties.' The defendant likewise put in evidence a copy of The Druggists' Circular and Chemical Gazette, for June, 1875, wherein there is an account of treatment by Dr. Edmunds, in the case of an amputated thigh, by a dressing of lint steeped in a hot solution of boracic acid, with most satisfactory results in preventing putrefactive discharge.

"Undoubtedly this evidence shows that the specific qualities of glycerine and of boracic were known, and that those articles had been successfully used in the instances narrated. But we agree with the court below in thinking that 'this evidence does not disclose that any one prior to Am Ende accomplished what he has described and claimed; *that the fact that others had done something quite similar, and had used separately or in different combinations, the ingredients of*

> *his claim, should not affect his patent.* All that is described in the prior publications the defendant may use with perfect immunity. They may use "lint steeped in a hot saturated solution of boracic acid,' or 'wadding saturated with a certain quantity of glycerine,' or boracic acid dissolved in glycerine; but they should not be permitted to use cotton combined with a solution of boracic acid and glycerine in the manner described in the specification, for that belongs to Am Ende.' "

The cases cited at page 22 of the petitioner's brief have no effect to the contrary.

In *Hollister* v. *Benedict Mfg. Co.*, 113 U. S. 59, the improvement was held to be obvious. It is pointed out in the opinion (at p. 73) that the solution occurred immediately the problem arose.

In *Aron* v. *Manhattan Railway Co.*, 132 U. S. 84 and *Grinnell Washing Machine Co.* v. *Johnson Co.*, 247 U. S. 426, the devices held unpatentable were mere aggregations of old mechanisms achieving no new result or function.

The cases of *Concrete Appliances Co.* v. *Gomery*, 269 U. S. 177, and *Powers-Kennedy Contracting Corp.* v. *Concrete Mixing & Conveying Co.*, 282 U. S. 175, involved apparatus for conveying wet concrete or other plastic materials. There was held to be no invention in view of the prior art showing substantially the same methods of conveying substantially the same materials.

The decision in *Saranac Machine Corp.* v. *Wirebounds Patent Co.*, 282 U. S. 704, is no authority for the petitioner's argument. There the patent declared invalid had not given rise to any new results. On the contrary, the patent that taught the procedure for achieving the new results had expired before the decision of this Court. As to it—the expired patent—this Court said (at p. 709):

> "The new method had a large and immediate commercial success; and we assume, as the court below held, that it involved invention. See *The Barbed*

Wire Patent, 143 U. S. 275, 283; *Krementz* v. *S. Cottle Co.*, 148 U. S. 556, 560; *Minerals Separation, Ltd.* v. *Hyde*, 242 U. S. 261."

Nor is the petitioner's argument supported by the decision of this Court holding invalid the Langmuir "high vacuum" patent in *DeForest Radio Co.* v. *General Electric Co.*, 283 U. S. 664, but quite the reverse.

The Court said, at page 678:

> "That the high vacuum tube was an improvement over the low vacuum tube of great importance, is not open to doubt. *Even though the improvement was accomplished by so simple a change in structure as could be brought about by reducing the pressure in the well known low vacuum tube by a few microns, still it may be invention.*"

But the opinion proceeded to show (at p. 679) that the prior paper of Lilienfeld

> "on 'The Conduction of Electricity,' *made a complete and explicit disclosure of the essentials of all the structures and methods of the Langmuir patent.*"

and at page 680:

> "The very fact that Lilienfeld knew and described the methods of the patent for obtaining high vacuum carries with it as a necessary corollary that the device itself, apart from its functioning and use, is lacking in patentable novelty. Hence, invention, if any there be, is embraced in the discovery of the principle that discharges above ionization voltages can be produced without substantial ionization if the vacuum be sufficiently high, and the disclosure that the device of the claims constitutes suitable means for putting the principle into practice. But Lilienfeld, in his paper of 1910, disclosed that he obtained discharges free from the effects of ionization, as Langmuir testified in interference proceedings in the Patent Office, and that he accomplished this through the attainment of high vacua by the very methods later described in the Langmuir patent."

and again at page 682:

> "Arnold, who was skilled in the art, and who had made studies of electrical discharges in high vacua,

> when shown a DeForest audion for the first time on November 14, 1912, immediately recognized and said that by increasing the vacuum the discharge would be sufficiently stable and have adequate power levels to enable the tube to be employed as a relay device in transcontinental telephony. The very fact that all of significance in the Langmuir improvement was obvious to one skilled in the art as soon as he saw the unimproved tube, as the District Court said, 'lies athwart a finding of invention.' ''

In addition the court found that there had been a complete prior use of the invention by DeForest (283 U. S. 685, 686).

In the case at bar, by contrast, no one disclosed the process in suit prior to Vogt *et al.*; no one, prior to their invention, suggested that it was obvious that steps of the double film system should be combined with steps of the single film system to produce the new results; no one made prior use of the process; no one made anything approaching "a complete and explicit disclosure of the essentials of all the structure and methods" of the patent in suit.

Indeed, on the basis of the reasoning of the decision in question, the improvement involved in the process in suit may still be invention even though accomplished by means which appear to the petitioner, arguing after the fact, to be so simple.

On the authority of the decisions of this court referred to, we submit that there was patentable invention and ingenuity in solving the long-standing problem and in providing for the practical art an instrument of such outstanding utility.

III. Analogous Use.

As a further defense, the petitioner argues lack of invention on the theory that the arts of composite printing and of talking moving pictures are analogous arts and that the process of the patent in suit was used before 1921 in the composite printing art. We believe there is no merit in this theory.

Composite printing of photographs is an art that lies in but one dimension. It appeals to but one sense, the sense of sight. Its function is to create an illusion of the *unreal* by putting together two parts or images that did not exist together in either scene as photographed. It involves no special problems of photography, and no new problem whatever of development. Even as applied to moving pictures, the only problem it presents is the laborious one of piecing the unrelated parts together.

Talking motion pictures, by contrast, open up a two-dimensional world. They appeal to *two* senses, the sense of sound as well as sight—the two senses by which almost all of our outward impressions are gained. They transform the ghostly images of the silent "movies" into living, laughing, talking realties. The function of the sound and picture film is to reproduce *reality* with all the fidelity that can be vested in mere mechanism—and to achieve this function many arts beyond photography must be harnessed and correlated.

The problems met in sound-on-film are totally different from those of the silent picture. They involve sound frequencies many hundredfold more rapid than the successive exposures used in moving pictures (*supra,* p. 3). They involve entirely different mechanisms of exposure and recording. It is far from the whole truth to call sound recording on film a mere matter of photography. If it is in any sense photography it is only in a minor sense, because of the many other elements and mechanisms involved in catching the original sound waves, transforming them into electrical current variations, amplifying them and then transforming them again into light wave variations to which the film is exposed. These are elements and mechanisms that were proposed in prior patents in the sound-on-film art, but they evidence the complicating factors that faced the workers in that art. Small wonder then that the two arts of sound-on-film and composite printing saw nothing in common before 1921.

If the arts were analogous, as petitioner argues, the analogy should work both ways. Why did not Jones or Messter or Rossi or the Biograph engineer at once conceive the process in suit, equipped as they say they were with knowledge of composite printing and with the early single film system patents of Haines, etc. at their disposal?

The fact is that composite printing involves two pictures appealing to but a single sense perception; talking picture films, by contrast, involve a single picture appealing to two sense perceptions. Prior to 1921 they were in different worlds of thought and purpose. The results to which each was addressed were remote and had no suggestion of interrelation.

There is *no evidence* of any real analogy between these arts. There is cogent and persuasive and contemporary evidence that they are non-analogous and remote. That evidence is in the mute testimony of every inventor and patentee of the prior art who worked in one or other of these arts and did not look for the solution of his problem in the other art or find it there if he did look.

So for years the single film system lived in paper patents and achieved nothing; the double film system was suggested and achieved nothing. And all that is here asserted in respect of composite printing was known or available to those early workers in the sound film art, yet they failed to see in it what petitioner asserts was perfectly obvious. Certainly all those concerned with talking pictures knew that quality reproduction was the touchstone of success. If it had been obvious that the secret lay in the adoption of certain simple practices from the art of composite printing and *if it had been obvious just which of those practices should be taken over and how combined,* can it be doubted that the adoption would not have been so long delayed?

We confidently assert on the record in this case that the arts in fact are so remote that no one, viewing the question realistically as of a date in 1921 just before the in-

vention in suit was made, would see in Messter's bizarre silent movie of an orchestra conductor, or in Jones's composite pictures of skyscapes, or Downing's printed titles, or in the "Master's Dream" a solution of the defective sound film systems that had been suggested in the prior art.

Finally, we submit, that the problems in sound recording are so utterly foreign to those in picture recording that it is anything but obvious, even today, that methods of recording, development or printing that work in the case of a picture film will work to the best advantage or indeed at all in the case of a film sound record.

Certainly no composite printer is shown by this record to have used or suggested, prior to 1921, *any* process for making "a combined sound and picture film"—nor is there any evidence of an earlier composite printing process that involved the conscious steps of differential recording and differential development appropriate to the distinct requirements of sound and picture films to which the invention in suit is addressed. The process of the patent was not known even in the composite printing art.

The fallacy of petitioner's argument is in overlooking the element of invention that was involved in conceiving and being able to work out a single product so made as to appeal for the first time to two sense perceptions without offending either. That was a new result that the composite printers (including the "Master" himself) had never dreamed of, and outstanding in quality and effectiveness beyond the best suggestions in the prior art of sound-on-film.

Petitioner's argument of non-invention on the theory of analogous use finds no authority applicable to the facts of the case at bar in the decisions cited in petitioner's brief (pp. 26 and 27).

In *Brown* v. *Piper*, 91 U. S. 37, the identical freezing process, patented as applied to fish and meat, had previously been applied to freezing ice cream—without any difference in apparatus, process or results.

This Court said (at p. 41) that the process there in suit was

> "without any exercise of the inventive faculty, and *without the development of any idea which can be deemed new or original* in the sense of the patent law.".

Here, by contrast, the idea of making a unitary uncompromised sound and picture positive found no analogy in the art of composite printing and was plainly new and original.

In *Pennsylvania Railroad Company* v. *Locomotive Engine Safety Truck Company,* 110 U. S. 490, the court said at page 493:

> "The question therefore is, whether employing, as the forward truck of a locomotive engine with fixed driving wheels, a truck already in use on railroad cars, has the novelty requisite to sustain a patent."

and at page 494:

> "The effect of the invention upon the engine, as compared with its effect upon the car, is the same in kind, though perhaps less in degree.
>
> "It is settled by many decisions of this court, which it is unnecessary to quote from or refer to in detail, that the application of an old process or machine to a similar or analogous subject, *with no change in the manner of application, and no result substantially distinct in its nature,* will not sustain a patent, even if the new form of result has not before been contemplated."

In *Dreyfus* v. *Searle,* 124 U. S. 60, the alleged improvement consisted solely in applying heat to wine barrels by pipes inside the barrels rather than outside, without the slightest evidence of change in purpose or result. The decision adds nothing to petitioner's argument.

In *Concrete Appliances Company et al.* v. *Gomery et al.,* 269 U. S. 177, the patent claimed apparatus for conveying wet concrete in building construction when similar apparatus had previously been used for conveying grain, coal, crushed stone, dry concrete and other mobile substances. The court held that the question of invention is one of fact dependent upon consideration of the state

of the prior art as applied to the particular device (p. 180).

Just as a simple change may involve invention if it accomplishes new and useful results and particularly if it fills a long-felt want and constitutes an important step in achieving success, so here, we submit, the conception of a process involving specific steps, some of which may have been known in and adopted from another art, may be invention even if the arts are not widely dissimilar, where the expedients so adopted produce new and useful results long sought and helpful in turning failure into success.

IV. Commercial Success.

There is no merit in the 4th Specification of Error, for the court below did not sustain the claim of invention in the patent in suit on the basis of commercial use, but rather, as we view it, weighed the success achieved by the process after its demonstration here in 1926 against the prior failures of the art and of the Western Electric Company as cogent evidence against the argument of obviousness.

The opinion of the court below (Opinions, pp. 34, 35, R. pp. 1229, 1230) makes it quite clear that that court carefully reviewed the invention on its merits against the disclosures of all the prior patents stressed by the petitioner and reached the independent conclusion that the process in suit involved invention over those disclosures. That conclusion of a court of able and experienced patent judges should have weight here.

The facts as to commercial success in the present case do, however, definitely refute the assertion of obviousness upon which the petitioner's argument of non-invention depends.

By reason of the position which the Western Electric Company has taken in dominating the talking motion picture industry (R. pp. 322, 326) through licenses under

its patents relating to electrical devices, amplifiers, loud speakers, microphones and the like (R. p. 326), the experience of that company prior to and after the disclosure of the invention in suit to its engineers, as evidenced by the record, is eloquent on the question of invention in the patented process. That experience is three-fold and is substantially undisputed.

The first chapter of that experience relates to the years 1913 to 1923, during which important decade repeated experiments were being performed in the research laboratories of the Western Electric Company and its associated companies relative to sound-on-film. The testimony refers to experiments made in 1913, again in 1916, further experiments in 1920 and in 1923 (R. p. 312). None of them got outside of the laboratory. They were abandoned from that time till 1927.

Petitioner argues (p. 37) that it is "unbelievable on its face" that the research laboratories of the "concerns defending this suit" should have been unable to work out the film problems here involved without help from the patentees.

Let us get the facts from the record.

The 1913 and 1916 experiments concerned sound alone, no pictures. The results were not satisfactory, had no commercial value, further development work was necessary on other apparatus (Wente, R. p. 312). The 1920 experiments involved both sound and pictures. Extensive tests failed to give correct exposure (Wente, R. p. 312). In 1923 (after the issuance of the German and British patents corresponding to the patent in suit, R. pp. 960, 994) sound and pictures were taken on separate negatives and printed on separate positives (Wente, R. p. 313). Even then there was not "separate development" in the sense of the patent in suit, *i. e.*, separate kinds of developers for the picture and sound records, according to the requirements of each. All Wente could say was that because there was only one developer tray in the laboratory they used this to develop one of the negatives, then

threw this developer out and made a fresh batch of developer for the other negative. For all he knew they used the same developer formula for each (R. pp. 358, 359).

On direct-examination occurred the following (R. p. 321):

> "Q. 47. It was about 1925 that you got them both [sound and picture records] on the same positive film for the reproduction, is that it? A. That is I think about right."

But on cross-examination he told quite a different story. Thus at R. p. 356, folio 1067:

> "We, in our department *after 1923,* I don't believe ever did make any other sound pictures—"

And speaking of the time "from 1923 on" he said at R. p. 359:

> "I am not sure whether we made any more picture, sound and picture records, *I am quite positive we did not.*"

Petitioner was unable to prove either that the Western Electric Company or any of its affiliates actually carried out the process here in suit, even in their laboratories (R. pp. 356, 357), until after the Engl visit in late 1926 when the whole matter was demonstrated before their eyes.

Its argument now that it is unbelievable that those companies could not have done so if the spirit had moved them is complacent but unconvincing.

On this record, we submit that it is plain that the Western Electric experiments with sound-on-film had stalled prior to 1926 and that the court below was correct in its interpretation of the evidence.

By contrast, the Western Electric engineers who had been working since 1915 on the parallel development of sound-on-disc achieved complete success. Dr. Wente said of this at R. p. 314:

> "By 1924, these engineers felt that the quality was sufficiently good, so that they could use this system for making talking pictures with commercial success,

> *where previous attempts had failed,* and in 1925, the system was shown to the Warner Brothers, and they became interested to take out a license, and in 1926, brought out the talking pictures under the name of Vitaphone.
>
> "The first public exhibition of that was August 6, 1926."

Thus Western Electric succeeded by its own efforts in commercializing sound-on-disc but it failed in its efforts to commercialize sound-on-film.

Again petitioner argues (p. 38) that prior to 1926 there was no demand for sound pictures. And in almost the same breath shows the absurdity of its suggestion by reference not only to the abortive efforts of the Western Electric Company with sound-on-film but to its continued and finally successful efforts with sound-on-disc. Can such an argument mask the fact, demonstrated by these long years of research and scores of patents, that the art was eager to hew down the obstacles and was alive to the huge potentialities that lay in achieving successful sound with pictures?

The fact is plain that Western Electric thought it saw the reward of its labors in sound-on-disc and rejected sound-on-film.*

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* Apparently as an obituary to these sound film efforts that terminated in 1923, Wente filed a patent application in April 1924 (R. p. 604) in which he disclosed a complicated arrangement which may afford a clue as to what he thought necessary to success in the use of sound-on-film. It involved operating the sound negative at greater speed than the picture negative and so required two separate negatives. It described the advantage of separate development and disclosed means for printing the separate sound and picture negatives on a single positive film—complicated of course by the necessity for moving the sound negative faster than the positive during the printing operation.

Prior to this application of Wente's, both the *Vogt* German patent No. 368,383 (R. p. 960) and the *Vogt* British patent No. 178,442 (R. p. 994) had issued on applications corresponding to the application for the patent

The second chapter relates to the demonstration of the process of the patent in suit to the practical engineers of the Western Electric Company in December 1926 and during the first six months of 1927. Apparatus was brought to this country by Dr. Engl, one of the patentees, and every detail of it was submitted to their examination. Mr. Otterson, president of Electrical Research Products, Inc., Mr. Drake, its vice-president, Dr. Crandall, Dr. Mackenzie and others of the Western Electric Company were called in to study the Tri-Ergon process in detail. Everything was laid open to their inspection and test (Joy, R. pp. 108-122; Drake, R. pp. 327, 328, 331; Wente, R. p. 361; Smith, R. pp. 415, 416, 424). This is not denied (see Petitioner's Brief, p. 20).

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in suit and were undoubtedly known to the patent department of the Western Electric Company. Wente said his idea was simply to run the sound record faster than the picture record and "subsequently printing the sound record down to a slower speed on a common film with the pictures" (R. p. 371), but actually a claim was made in that application—claim 31—which is in substance a claim for the invention in issue and Wente swore at that time that he was the inventor of it (R. p. 624).

The claim was rejected on the British patent to Vogt *et al.* (R. p. 627) and on the next action was cancelled (R. p. 631). Despite his oath in 1924 Wente deposed at the trial (1931) that the process of that claim 31 was an obvious one in 1924 (R. p. 371).

If there is any significance in the incident, it is that in 1924 he saw patentability in the process which he hoped to claim for his own company, whereas in 1931 he held just the opposite view when the shoe was on the other foot.

Petitioner's Brief gives the inaccurate impression (at p. 20) that this incident was held by the court below to estop the petitioner from questioning the validity of the patent. Obviously it had no such effect for the court proceeded immediately to consider the question on its merits. As stated in *Sugar Apparatus* v. *Yaryan*, 43 Fed. 140, 143, Wente's assertions in 1924 that the subject matter here in issue was patentable may be taken, in view of his expert knowledge of the art, "as the expressions of a competent expert."

The third chapter is the chapter on commercial success in the face of powerful opposition.

By 1928 the Western Electric Company had the talking motion picture business in the hollow of its hand (R. pp. 322, 336). In its license contracts the Western Electric Company had the right to dictate the system to be used by its producer-licensees (R. p. 413). It was wedded to sound-on-disc; it had no confidence in sound-on-film (R. p. 413). The Fox Film Company, though a Western Electric licensee, preferred sound-on-film and insisted upon using it (R. pp. 413, 414). The sound-on-film pictures which it produced soon became popular because of the superior convenience and economy of sound-on-film over sound-on-disc. The use of sound-on-film grew rapidly despite the Western Electric Company's preference for sound-on-disc. By the time of the trial of this suit in 1931 sound-on-film had largely superseded sound-on-disc (R. pp. 419, 420). And it is not denied that the process of producing that film, which thus became standard in the industry, is the process of the patent in suit.

Putting these three chapters together we find that with all the prior art here of record at their disposal the Western Electric engineers had made a failure of sound-on-film until the Tri-Ergon system was disclosed to them and that thereafter over their continued opposition that system, including as an essential part the process of the patent in suit, by dint of its sheer merit, forced commercial acceptance to the point of substantially superseding all other systems.

And now the Western Electric Company attempts to defend its licensee, the petitioner herein, on the ground that the process in suit is of such commercial necessity that unless the decision below be reversed the entire industry will be under the coercion of the respondent.

V. Coercion.

On page 30 of petitioner's brief the following suggestion appears:

> "The motion picture industry should not be compelled to pay tribute to this so-called invention, every conception of which was old and the steps of which were obvious to one with any substantial knowledge of the subject."

If this is merely an assertion that the owner of an invalid patent should not be permitted to enforce it, the assertion of course would not be worth making. Taken in connection, however, with certain averments in the petition for rehearing filed in this cause, it is possible that what the petitioner is really attempting to do is subtly to influence the decision of this Court upon the validity of the patent by insinuating that an oppressive or unlawful use of it will be made if the decree of the Circuit Court of Appeals is permitted to stand. If this is intended, the Court may be depended upon to ignore the suggestion. When (as alleged in the petition for rehearing) the respondent promptly brought suit against various infringers it was merely seeking to enforce a valuable right which the Circuit Court of Appeals had vindicated and this Court had refused to question. The fact that the suits were brought in the Circuit in which the patent had been upheld should not be commented upon adversely. A decree sustaining an important patent is not a mural decoration to be framed and contemplated with silent satisfaction; it is a muniment of title which it is the right of its possessor to protect and enforce. To begin infringement suits first in the jurisdiction where one's title has been sustained is a measure of practical common sense. The fact that certain important infringers are amenable to process in that jurisdiction is in no sense a "peculiar circumstance" (as suggested in the petition) but a simple matter of fact of which the respondent properly took advantage.

And yet (again referring to the petition for rehearing) we read at page 4 the following:

> "We believe that these facts make it apparent that the respondent plans to confine this litigation to the Second Circuit in which it has received a favorable decree. The opportunities of the respondent to *coerce* the industry upon the basis of the decision of the Circuit Court of Appeals for the Second Circuit in this case are enhanced by the fact that the motion picture industry is a 'quick' industry whose business cannot tolerate delay."

This passage voices a sentiment not infrequently expressed on behalf of those dominant corporate groups who have come to confuse power with right. Even the American Telephone & Telegraph Company and its subsidiaries are within the law and must accustom themselves to its enforcement. If it were true, which it is not, that the owners of the Tri-Ergon patent were in a position to dominate the industry this circumstance would involve "coercion" in no other sense than that in which this Court "coerces" a lower tribunal by the issuance of its mandate.

Manifestly this type of "coercion", which is within the law and based upon the considered judgment of courts and upon the constitutional policy of encouraging invention, is totally different from the type of coercion which results from the domination of industry by contracts in restraint of trade. That petitioner's licensor, the Western Electric Co., in any event is scarcely in a position to cry "coercion", is evidenced by the decision of the District Court of Delaware in *Stanley Co. of America* v. *American Telephone & Telegraph Co.*, 4 Fed. Supp. 80 (1933), holding its own elaborate system of talking motion picture contracts to be illegal and void.

But the simple fact is that possession of the patent in suit carries with it no power to dominate the talking picture industry. The invention in suit is for a specific process. Within its scope it has served the public well. It has won its way to commercial acceptance in spite of powerful opposition. It is an invention that deserves the benefit of the rule "*ut res magis valeat quam pereat*",

to the end that the achievement of a meritorious improver may not be struck down at the instance of those who choose to accept the benefits of that achievement in voluntary preference to other available methods. That there *are* other available methods is beyond dispute. The successful making of talking motion pictures by the synchronized operation of sound-on-disc and sight-on-film is a process approved by the experience of the industry. The pictures and sound thus produced are of an artistic perfection at least as great as those produced by the Tri-Ergon process.

The patent asserts no monopoly of means for achieving quality results in talking motion pictures, but solely of that specific process for treating a specific sound carrier—film—which the practical art has found convenient and economical. It would be a novel proposition to assert, as petitioner appears to here, that a patent should be held invalid for the reason that it reduces the costs of those who voluntarily operate under it.

Nor is it seemly to taunt the owners of the Tri-Ergon patent with their failure up to date to secure licensees for its use. This failure is the direct result of a perverse refusal to recognize the right which the patent protects. Let the patent stand on its own merits, free from the dictates of the electrical companies, and the natural result will be that those producers and exhibitors now operating under Western Electric licenses will be given an opportunity to determine which of two equally available methods promises the greater measure of commercial success.

VI. Claims 8 and 9.

Petitioner's brief is in error in stating (p. 41) that the court below disregarded the argument that these claims were broader than the disclosure of the application as filed.

The opinion below contains the following (Opinions, p. 36, R. p. 1231):

> "After March 31, 1925, claims corresponding in scope to claims 8 and 9 in suit were asserted in the appli-

cation. There were no intervening rights of any sort established by the appellee or by the public in the interval between November 25, 1922 and March 31, 1925, nor was there any unreasonable delay on the part of the applicants in *re-asserting their invention in the broad scope justified by the original disclosure.*"

The argument is shown to be without substance by the following statement from petitioner's own brief (p. 43):

> "The original application was filed March 29, 1922 (R. 77), with four claims (R. 480), *not unlike the claims in suit.*"

The assertion that claims 8 and 9 were new claims inserted in July 1931, nine years after the application was filed and considerably after the petitioner had started to use the process (petitioner's brief p. 41) is hardly a complete statement of the facts. For from and after March 31, 1925, long before any suggestion of intervening rights of the petitioner or others, claims were re-asserted in the application (R. p. 499) which correspond in scope to claims 8 and 9 in suit.

The assertion and re-assertion of these claims in the absence of intervening rights is fully justified by the decisions of this court.

Hobbs v. *Beach,* 180 U. S. 383, 395;
Overland v. *Packard,* 274 U. S. 417, 421.

and see

Wirebounds Patents Co. et al. v. *Saranac Automatic Mach. Corp.* 37 Fed. (2d) 830 (C. C. A. 6, 1930) where the court said, at p. 840:

> "Applicants then cancelled these claims. This was rather plainly a mistake, as the Patent Office later decided when it approved similar claims; *but, mistake or not, this action by applicants was, of course, subject to reconsideration and disavowal by them at any time during the progress of the application, before other rights had intervened. It was an abandonment only until they should change their minds and reclaim.*"

The cases cited at page 41 of the petitioner's brief have no pertinence. Here there were no intervening rights prior to the assertion of the subject matter of the claims. The claims involve no change of theory or assertion of a new action or effect. The original specification and claims clearly disclosed recording on separate negatives as well as on a single negative. Differential recording is an important part of the invention, and is entitled to be protected in combination with the printing of the resulting differential sound and picture records on a single positive film.

Neither claim is anticipated by Greensfelder or the composite printing process. Both claims are limited to the photographing of sound and pictures simultaneously on separate films. Neither of the references disclose simultaneous recording or the problems it gives rise to in the talking motion picture art. Greensfelder has no disclosure of photographing sound in the sense of the process in suit. Composite printing has no relation to sound of any sort.

In the absence either of anticipation or of intervening rights, we submit that there is no merit in the attack on these claims.

VII. Disclaimer.

Petitioner's brief refers to an argument to be made respecting the validity of a different disclaimer in a different case involving a different patent and a wholly different record, and asserts that it will "leave the point" as to validity of the disclaimer in the case at bar "to abide the conclusion in the other case" (Petitioner's brief, p. 42).

There is no assertion that the cases are on all fours. The validity or invalidity of the disclaimer here in suit must depend solely on the facts here of record; it cannot depend upon the facts in another case.

Here the disclaimer (R. p. 472) relates to and affects only claims 6 and 7. It imports into them explicitly the

requirement of separate development which had been implicit in both claims even before the disclaimer.

Each claim, as issued, recited the simultaneous recording step on separate films,

> "so that the picture and sound negatives may be separately developed in a manner appropriate for each" (R. p. 469).

The disclaimer simply emphasizes what was already an implicit limitation in the claims and the principal feature of the process to which the patent is addressed.

The disclaimer is entirely proper in avoiding any possibility of doubt as to the scope and limitation of the claims.

Minerals Separations, Ltd. v. *Butte*, 250 U. S. 336.

Conclusion.

The important electrical links in the chain of mechanisms necessary for recording and reproducing sound-on-film were known prior to 1921; microphones were highly developed in telephone practice; amplifiers were old with the Lowenstein invention of 1912;* the general idea of using electricity to transform sound vibrations into light vibrations for recording on film and conversely for reproducing from the film record into sound was disclosed in patents such as Haines, MacCarty, etc. Yet prior to 1921 there was not so much as one inch of sound film in commercial use.

The Tri-Ergon inventors were ingenious in putting their fingers on the links of sensitive weakness in the chain, where distortion factors of critical importance lay, and in pointing out the means by which the chain at those points could be forged of full strength and efficiency.

In the process in suit they taught the art effective means for avoiding distortion in the treatment of the negative films and the production of the positive. In the patent

* *Western Electric Co.* v. *Wallerstein*, 60 Fed. (2d) 723, 724.

in suit in the companion cases, Nos. 255 and 256, they taught the art effective means for avoiding distortion in the translation of the sound to and from the film by light.

The evidence of the practical art shows plainly that these links are indispensable to the chain—if sound-on-film be chosen over sound-on-disc.

Of what materiality would it be, if true, as charged by the petitioner (Brief, p. 3), that the patent owner has not benefited financially from the invention—

> "has taken no part in the motion picture industry, either by production of motion pictures, furnishing of equipment or granting of licenses."

The reason for it is obvious in the face of the opposing monopoly of the Western Electric Company and its affiliates. Indeed, the success of the *invention* under such circumstances is the significant thing; and that success is the more significant in the light of the respondent's position.

As was well said by the Circuit Court of Appeals, (Opinions, p. 33, R. p. 1228):

> "The commercial use of the patented process is fullsome testimony of its inventive worth. *The result of testing it by the inquiry, as it should be, of what has been the commercial success of the invention rather than the appellant's commercial success, adds greatly to its validity.*"

In the language of the *Grant Tire* case (*supra*, p. 11): The petitioner uses the Vogt process.

> "It gives the tribute of its praise to the prior art; it gives the [Vogt process] the tribute of its imitation as others have done."

Reviewing the record as a whole, we submit that the following propositions are by it fully sustained:

First, that there is no evidence of anticipation or prior use of the process covered by the patent in suit.

Second, that while the process in question now seems simple and is easily understood, it required at the time inventive imagination to identify the precise difficulties

to be met, to conceive the means of overcoming them and to evolve a process which accomplished the result to the satisfaction of the industry.

Third, that the attempt to find an analogue in the field of composite photography is an attempt that lacks even plausibility, in view of the essential difference between the problem of combining picture with picture and the problem of combining picture with sound.

Fourth, that the Circuit Court of Appeals did not deduce patentability from the commercial success of the process in suit but justifiably regarded such success as refuting the supposition of obviousness and as indicating the futility of the efforts of Western Electric to achieve success with sound-on-film.

Fifth, that the suggestion of "coercion" of the industry by the respondent is baseless in view of the fact that the patent is not one that gives its owner a power to monopolize the talking picture industry since it relates to but one means of achieving the desired result where other tried and available means of accomplishing results just as good in quality are ready at hand for those who do not choose to use the present invention.

The simple question before this Court is whether the Circuit Court of Appeals erred in deciding that the patent should stand. We respectfully submit that the decree appealed from was legally sound, essentially fair and commercially wholesome. We earnestly urge its final affirmance.

Respectfully submitted,

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